

9. (Amended) [Vector] The vector according to claim 8, [characterized in that it] wherein said vector is a plasmid vector or a viral vector derived from a virus selected from the group consisting of poxvirus, adenovirus, baculovirus, herpesvirus, adeno-associated virus and retrovirus [group].

C' 10. (Twice Amended) [Vector] The vector [for the expression of one or more genes of interest comprising the nucleotide sequence used according to claim 1] according to claim 8, which is derived from a retrovirus and which comprises at least the following elements associated in a functional manner: a retroviral 5' LTR and a retroviral 3' LTR, one or more genes of interest, and said nucleotide sequence [as defined in claim 1] to allow [or improve] the encapsidation of said vector into a viral particle [and/or] or as an IRES site to allow or promote the expression of a gene of interest positioned downstream of said nucleotide sequence.

11. (Amended) [Retroviral] The retroviral vector according to claim 10, in which said nucleotide sequence is an IRES site and comprising, in addition, an encapsidation region which is heterologous to said nucleotide sequence.

Sub D² 12. (Twice Amended) [Retroviral] The retroviral vector ~~according to claim 10,~~ comprising at least:

- (a) a retroviral 5' LTR,
- (b) an encapsidation region,

[(c)] optionally, a first gene of interest followed by an internal promoter region of a different origin from that of said retroviral 5' LTR,]

[(d)] (c) a [second] gene of interest,

[(e)] (d) an IRES site,

[(f)] (e) a third gene of interest, and

[(g)] (f) a retroviral 3' LTR,

at least one of the encapsidation region and the IRES site consisting of said nucleotide sequence.

13. (Amended) [Retroviral] The retroviral vector according to claim [12] 48, in which the internal promoter region, the second gene of interest, the IRES site and the third gene of interest are in an opposite orientation relative to the retroviral 5' and 3' LTRs.

546 D³ 14. (Amended) [Retroviral] The retroviral vector according to claim 12, in which the encapsidation region is derived from a murine retrovirus, [especially from an MoMLV], or from a VL30-type retrotransposon and the IRES site comprises a nucleotide sequence which is substantially homologous or identical to the sequence presented in the sequence identifier SEQ ID NO: 2 or to the DNA equivalent of said sequence:

- (i) starting at nucleotide 1 and ending at nucleotide 578,
- (ii) starting at nucleotide 265 and ending at nucleotide 578, or
- (iii) starting at nucleotide 452 and ending at nucleotide 578.

15. (Amended) [Retroviral] The retroviral vector according to claim 14, in which the encapsidation region is derived from an MoMLV and the IRES site comprises a nucleotide sequence identical to the sequence presented in sequence identified SEQ ID NO: 2 or to the DNA equivalent of said sequence, starting at nucleotide 265 and ending at nucleotide 578 [or starting at nucleotide 452 and ending at nucleotide 578].

sub D⁴ 16. (Amended) [Retroviral] The retroviral vector according to claim 10, comprising a retroviral 5' LTR derived from an REV virus, [especially SNV,] a retroviral 3' LTR of any origin, one or more genes of interest, and a nucleotide sequence which is substantially homologous or identical to the sequence presented in the sequence identifier SEQ ID NO: 2 or to the DNA equivalent of said sequence starting at nucleotide 1 and ending at nucleotide 578[, or starting at nucleotide 265 and ending at nucleotide 578, as encapsidation region].

17. (Twice Amended) [Vector] The vector according to claim 8, comprising a gene of interest encoding a product of expression selected from factor VIII, factor IX, the CFTR protein, dystrophin, insulin, alpha-, beta- or gamma-interferon, an interleukin (IL) [especially IL-2] and a selectable marker.

18. (Amended) [Viral] A viral particle generated from a viral vector according to claim 8.

Q 154605 19. (Twice Amended) [Cell] ~~A cell comprising a vector [according to claim 8]~~
~~or infected with a viral particle generated from a viral vector according to claim 8.~~

22. (Twice Amended) [Pharmaceutical] A pharmaceutical composition
comprising, as therapeutic or prophylactic agent, a vector [according to claim 8], a viral
particle generated from a viral vector [according to claim 8], a cell comprising a vector
[according to claim 8] or infected with a viral particle generated from a viral vector
Q 2 according to claim 8[, or a polypeptide prepared from said vector, viral particle or cell,] in
combination with a pharmaceutically acceptable vehicle.

23. (Twice Amended) [Pharmaceutical] The pharmaceutical composition
according to claim 22, [characterized in that it] wherein said composition comprises
between 10^4 and 10^{14} pfu[, and preferably between 10^6 and 10^{11} pfu] viral particles.

Kindly add the following new claims:

sub 06 25. A method for providing an internal ribosome entry site (IRES) to a vector
for the transfer and expression of one or more genes of interest, comprising the step of
Q 3 introducing into said vector a nucleotide sequence isolated from the 5' end of the genomic
RNA of a type C retrovirus selected from the group consisting of REV and MSV or from
the DNA equivalent of said genomic RNA.

26. The method of claim 25, wherein said REV is an avian reticuloendotheliosis virus.

27. The method of claim 26, wherein said avian reticuloendotheliosis virus is of type A.

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28. The method of claim 27, wherein said nucleotide sequence comprises at least 100 nucleotides and at most 800 nucleotides substantially homologous or identical to the sequence presented in the sequence identifier SEQ ID NO:1 or to the DNA equivalent of said sequence.

29. The method of claim 28, wherein said nucleotide sequence is substantially homologous or identical to the sequence presented in the sequence identifier SEQ ID NO:2 or to the DNA equivalent of said sequence:

- (i) starting at nucleotide 1 and ending at nucleotide 578,
- (ii) starting at nucleotide 265 and ending at nucleotide 578, or
- (iii) starting at nucleotide 452 and ending at nucleotide 578.

30. The method of claim 29, wherein said nucleotide sequence is identical to the sequence presented in the sequence identifier SEQ ID NO:2 or to the DNA equivalent of said sequence:

- (i) starting at nucleotide 1 and ending at nucleotide 578,

(ii) starting at nucleotide 265 and ending at nucleotide 578, or

(iii) starting at nucleotide 452 and ending at nucleotide 578.

sub D⁸

31. A method of allowing or activating the encapsidation of a retrovirus or of a retroviral vector, comprising the step of introducing into said retrovirus or retroviral vector, a nucleotide sequence isolated from the 5' end of the genomic RNA of a type C retrovirus selected from the group consisting of REV and MSV or from the DNA equivalent of said genomic RNA.

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32. The method of claim 31, wherein said REV is an avian reticuloendotheliosis virus.

33. The method of claim 32, wherein said avian reticuloendotheliosis virus is of type A.

sub D⁹

34. The method of claim 33, wherein said nucleotide sequence comprises at least 100 nucleotides and at most 800 nucleotides substantially homologous or identical to the sequence presented in the sequence identifier SEQ ID NO:1 or to the DNA equivalent of said sequence.

35. The method of claim 34, wherein said nucleotide sequence is substantially homologous or identical to the sequence presented in the sequence identifier SEQ ID NO:2 or to the DNA equivalent of said sequence:

- (i) starting at nucleotide 1 and ending at nucleotide 578,
- (ii) starting at nucleotide 265 and ending at nucleotide 578, or
- (iii) starting at nucleotide 452 and ending at nucleotide 578.

36. The method of claim 35, wherein said nucleotide sequence is identical to the sequence presented in the sequence identifier SEQ ID NO:2 or to the DNA equivalent of said sequence:

- (i) starting at nucleotide 1 and ending at nucleotide 578,
- (ii) starting at nucleotide 265 and ending at nucleotide 578, or
- (iii) starting at nucleotide 452 and ending at nucleotide 578.

37. A method of treating or preventing a genetic disease, a cancer or an infection disease, comprising the step of administering a therapeutically effective quantity of a vector according to claim 8, a viral particle according to claim 18 or a cell according to claim 19, to a patient requiring such a treatment.

38. A method for the preparation of one or more polypeptides of interest by the recombination route, comprising the step of culturing in vitro a cell comprising a vector

according to claim 8 or ~~infected with a viral particle according to claim 18 and harvesting~~
said polypeptide(s) from the supernatant or from the cell culture.

39. A method for producing a transgenic animal, ~~comprising the step of~~
integrating into the genome of said animal a vector for the expression of one or more genes
of interest according to claim 8.

Sub D'' 40. A method for expressing one or more genes of interest into pluripotent cells,
comprising the step of transfecting or ~~infected~~ said pluripotent cells with a vector or a viral
particle generated from a viral vector according to claim 8 or a pharmaceutical composition
prepared from said vector or viral particle.

41. The method of claim 40, wherein said pluripotent cells are of the central
nervous system.

42. The vector of claim 8, wherein said REV is an avian reticuloendotheliosis
virus.

43. The vector of claim 42, wherein said avian reticuloendotheliosis virus is of
type A.

Sub D¹² 44. The vector of claim 43, wherein ~~said nucleotide sequence comprises at least~~
100 nucleotides and at most 800 nucleotides substantially homologous or identical to the

sequence presented in the sequence identifier SEQ ID NO:1 or to the DNA equivalent of said sequence.

45. The vector of claim 44, wherein said nucleotide sequence is substantially homologous or identical to the sequence presented in the sequence identifier SEQ ID NO:2 or to the DNA equivalent of said sequence:

- C-3
- (i) starting at nucleotide 1 and ending at nucleotide 578,
 - (ii) starting at nucleotide 265 and ending at nucleotide 578, or
 - (iii) starting at nucleotide 452 and ending at nucleotide 578.

46. The vector of claim 45, wherein said nucleotide sequence is identical to the sequence presented in the sequence identifier SEQ ID NO:2 or to the DNA equivalent of said sequence :

- (i) starting at nucleotide 1 and ending at nucleotide 578,
- (ii) starting at nucleotide 265 and ending at nucleotide 578, or
- (iii) starting at nucleotide 452 and ending at nucleotide 578.

47. The retroviral vector according to claim 11, in which said encapsidation region is from MoMLV.

sub O¹³ 48. The retroviral vector according to claim 12, wherein said vector further comprises a first gene of interest followed by an internal promoter region with a different origin from that of said retroviral 5' LTR.

49. The retroviral vector according to claim 15, in which the encapsidation region is derived from an MoMLV and the IRES site comprises a nucleotide sequence identical to the sequence presented in the sequence identifier SEQ ID NO:2 or to the DNA equivalent of said sequence, starting at nucleotide 452 and ending at nucleotide 578.

sub O¹⁴ 50. The retroviral vector according to claim 16, comprising a retroviral 5' LTR derived from a REV virus, a retroviral 3' LTR of any origin, one or more genes of interest, and a nucleotide sequence which is substantially homologous or identical to the sequence presented in the sequence identifier SEQ ID NO:2 or to the DNA equivalent of said sequence, starting at nucleotide 265 and ending at nucleotide 578 as encapsidation region.

REMARKS

Entry of the foregoing, reexamination and further and favorable reconsideration of the subject application in light of the following remarks, pursuant to and consistent with 37 C.F.R. § 1.112, are respectfully requested.

By the foregoing amendment, claims 1-7, 20, 21 and 24 have been canceled without prejudice or disclaimer of the subject matter recited therein. Claims 8-19, 22 and 23 have